

CLAIMS

What is claimed is:

1. An actuator comprising: a motor operable to move an output member, the actuator further including a shuttle and a camming arrangement axially movable relative to each other to provide rotational indexing of the shuttle and the camming arrangement relative to each other, so that different output positions of the output member are provided for.
2. The actuator as defined in claim 1 in which the motor drives a worm screw in threaded engagement with the output member.
3. The actuator as defined in claim 2 in which the motor drives the worm screw via gears.
4. The actuator as defined in claim 2 in which the motor drives the output member via a centrifugal clutch.
5. The actuator as defined in claim 1 in which the motor drives the output member in a first direction.
6. The actuator as defined in claim 1 in which a bias mechanism biases the output member in a second direction.
7. The actuator as defined in claim 1 in which the shuttle is axially fast on the output member.
8. The actuator as defined in claim 1 in which the shuttle is rotatable relative to the output member.

9. The actuator as defined in claim 1 in which the shuttle is a cam follower which has an annular body and at least one radially projecting cam follower pin.
10. The actuator as defined in claim 1 in which the shuttle further acts as a stop abutment to define different output positions of the actuator.
11. The actuator as defined in claim 1 in which the camming arrangement is provided by a first cam surface on a first axial side of the shuttle and a second cam surface on a second axial side of the shuttle.
12. The actuator as defined in claim 11 in which the first and second cam surfaces each provide rotational indexing of the shuttle relative to the camming arrangement.
13. The actuator as defined in claim 11 in which the first and second cam surfaces include an array of teeth edges, with a cam follower stop being located between adjacent teeth edges.
14. The actuator as defined in claim 13 in which the cam follower stops of the first cam surface provide differing output positions of the actuator.
15. The actuator as defined in claim 13 in which the cam follower stops of the second cam surface provide differing output positions of the actuator.
16. The actuator as defined in claim 1 having a powered position corresponding to each of the output positions of the actuator.
17. The actuator as defined in claim 1 having an at rest position differing from the powered output positions of the actuator.

18. The actuator as defined in claim 1 for use in a vehicle door locking system to provide locking and unlocking a vehicle door lock.
19. The actuator as defined in claim 18 further providing for super locking of the vehicle door lock.
20. The actuator as defined in claim 1 in which the output positions are located on a straight line.
21. The actuator as defined in claim 1 in which the motor is powered in a single direction to provide for the differing output positions of the actuator.